

Abstract of the Disclosure

Implants and associated delivery systems for promoting angiogenesis in ischemic tissue are provided. The implants may be delivered percutaneously, thoracically or surgically and are particularly well suited for implantation into the myocardium of the heart. The implants are configured to have a first configuration having a low profile and an expanded, second configuration having a large profile. The implants are delivered to the ischemic tissue location in the first configuration, implanted then expanded to the second configuration. The expanded implants maintain a stress on the surrounding tissue, irritating and slightly injuring the tissue to provoke an injury response that results in angiogenesis. The flow of blood from the surrounding tissue into the implant and pooling of the blood in and around the implant leads to thrombosis and fibrin growth. This healing process leads to angiogenesis in the tissue surrounding the implant. Additionally, the implants may contain an angiogenic substance or a thrombus of blood, preloaded or injected after implantation to aid in initiating angiogenesis.

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